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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|-------------|----------------------|---------------------|------------------|
| 10/761,453 | 01/21/2004 | Yong-Joo Jo | 4611-035 | 3044 |
| 22440 | 7590 | 06/07/2004 | EXAMINER | |
| GOTTLIEB RACKMAN & REISMAN PC | | | THOMPSON, TIMOTHY J | |
| 270 MADISON AVENUE | | | ART UNIT | |
| 8TH FLOOR | | | PAPER NUMBER | |
| NEW YORK, NY 100160601 | | | 2873 | |

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|---------------------------|--|
| Office Action Summary | Application No. 10/761,453 | Applicant(s) JO ET AL. | |
| | Examiner Timothy J Thompson | Art Unit 2873 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al.(U.S. Patent No. 5,071,235).

Regarding claim 1, Mori et al. discloses a first lens including least one aspherical plane and having a positive refractivity(First embodiment, r1-r2); a perforated iris separated from the first lens by a designated for preventing unnecessary incident light from being incident onto an optical system(col 5, lines 1-5); second lens separated from the perforated iris a designated distance, including and having a positive refractivity (First embodiment, r3-r4); and third lens separated from the second lens by designated distance, including at least one aspherical plane and having a negative refractivity(First embodiment, r5-r6), wherein the first lens, the perforated iris, the second lens and the third lens are arranged sequentially from subject, and the perforated iris located between the first lens and the second lens(embodiment 1).

Regarding claim 3, Mori et al. discloses $F1/f = .566$ (with the focal length being equal to 36.1); $r1/f = .5997$.

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Regarding claim 5, Mori et al. discloses $F2/f = .9776$ (with the focal length being equal to 36.1); $r4/f = 2.9$.

Regarding claim 9, Mori et al. discloses $oal/f = 1.28$; since the backfocal length of the lens system, when the focal length is 36.1, is equal to 9.053792.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama(U.S. Patent No. 5,078,988) in view of Mori et al.(U.S. Patent No. 5,071,235).

Regarding claim 1, Nakayama discloses a first lens having a positive refractivity (Example 1, $r1-r2$); a perforated iris separated from the first lens by a designated for preventing unnecessary incident light from being incident onto an optical system (Example 1, $r3$); second lens separated from the perforated iris a designated distance, including and having a positive refractivity (Example 1, $r4-r5$); and third lens separated from the second lens by designated distance, including at least one aspherical plane and having a negative refractivity(Example 1, $r6-r7$), wherein the first lens, the perforated iris, the second lens and the third lens are arranged sequentially from

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subject, and the perforated iris located between the first lens and the second lens(Fig 1a). Nakayama does not disclose an aspheric surface on the first and third lens. However, Mori et al. discloses an aspheric surface on the first and third lenses(first embodiment). It would have been obvious to one skilled in the art at the time of the invention to place an aspheric surface on the first and third lenses as shown by Mori et al., in the lens device of Nakayama, since as shown by Mori et al., aspheric surfaces are commonly placed on the first and third lenses so as to correct for aberrations.

Regarding claim 7, Mori et al. discloses $F3/f = .8382$ (with the focal length being equal to 68); $r6/f = 2.79$.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al.(U.S. Patent No. 5,071,235) as applied to claim 1 above, and further in view of Tanaka et al.(U.S. Patent No. 5,760,966).

Regarding claim 2, Mori et al., as detailed in claim rejection 1, above does not disclose using an IR filter separated from the third lens by a designated distance for filtering infrared wavelengths incident onto the optical system so as to protect an image from the infrared wavelength. However, Tanaka et al. discloses using an IR filter separated from the last lens by a designated distance for filtering infrared wavelengths incident onto the optical system so as to protect an image from the infrared wavelength (fig 1, 14, col 5, lines 18-20). It would have been obvious to one skilled in the art at the time of the invention to place an IR filter behind the third lens(last lens) as shown by

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Tanaka et al., in the lens device of Mori et al., since as shown by Tanaka et al., IR filters are commonly used for cutting infrared light to image pickup device.

Claims 4, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al.(U.S. Patent No. 5,071,235) as applied to claims 3 and 5 above, and further in view of Mogami(U.S. Patent No. 4,540,249).

Regarding claim 4, Mori et al., as detailed in claim rejection 3 above, does not disclose the first lens is a plastic lens. However, Mogami discloses constructing the lens of a lens system from plastic since they are light in weight and have a low cost(col 2, lines 10-20). It would have been obvious to one skilled in the art at the time of the invention to use plastic for the lenses as shown by Mogami, in the lens device of Mori et al., since as shown by Mogami, plastic lenses are commonly used in lens systems since they lighten the lens system as well as reduce the cost of the lens system.

Regarding claim 6, Mori et al., as detailed in claim rejection 5 above, does not disclose the first lens is a plastic lens. However, Mogami discloses constructing the lens of a lens system from plastic since they are light in weight and have a low cost(col 2, lines 10-20). It would have been obvious to one skilled in the art at the time of the invention to use plastic for the lenses as shown by Mogami, in the lens device of Mori et al., since as shown by Mogami, plastic lenses are commonly used in lens systems since they lighten the lens system as well as reduce the cost of the lens system.

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Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama(U.S. Patent No. 5,078,988) in view of Mori et al.(U.S. Patent No. 5,071,235) as applied to claim 7 above, and further in view of Mogami(U.S. Patent No. 4,540,249).


Regarding claim 8, a modified Nakayama, as detailed in claim rejection 7 above, does not disclose the first lens is a plastic lens. However, Mogami discloses constructing the lens of a lens system from plastic since they are light in weight and have a low cost(col 2, lines 10-20). It would have been obvious to one skilled in the art at the time of the invention to use plastic for the lenses as shown by Mogami, in the lens device of a modified Nakayama, since as shown by Mogami, plastic lenses are commonly used in lens systems since they lighten the lens system as well as reduce the cost of the lens system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (571) 272-2328.

T.J.T.

5/24/04


5/24/04